

COMMERCIAL STANDARD CS216-58

WITHDRAWN

Asphalt Insulating Siding

A recorded
voluntary standard of the
trade published by
the U. S. Department
of Commerce



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U. S. DEPARTMENT OF COMMERCE

SINCLAIR WEEKS, Secretary

Issued by

OFFICE OF TECHNICAL SERVICES

Commodity Standards Division

With the cooperation of

NATIONAL BUREAU OF STANDARDS

COMMERCIAL STANDARDS

Commercial Standards are developed by manufacturers, distributors, and users in cooperation with the Commodity Standards Division of the Office of Technical Services, and with the National Bureau of Standards. Their purpose is to establish quality criteria, standard methods of test, rating, certification, and labeling of manufactured commodities, and to provide uniform bases for fair competition.

The adoption and use of a Commercial Standard is voluntary. However, when reference to a Commercial Standard is made in contracts, labels, invoices, or advertising literature, the provisions of the standard are enforceable through usual legal channels as a part of the sales contract.

Commercial Standards originate with the proponent industry. The sponsors may be manufacturers, distributors, or users of the specific product. One of these three elements of industry submits to the Commodity Standards Division the necessary data to be used as the basis for developing a standard of practice. The division, by means of assembled conferences or letter referenda, or both, assists the sponsor group in arriving at a tentative standard of practice and thereafter refers it to the other elements of the same industry for approval or for constructive criticism that will be helpful in making any necessary adjustments. The regular procedure of the division assures continuous servicing of each Commercial Standard through review and revision, whenever, in the opinion of the industry, changing conditions warrant such action.

SIMPLIFIED PRACTICE RECOMMENDATIONS

Under a similar procedure the Commodity Standards Division cooperates with industries in the establishment of Simplified Practice Recommendations. Their purpose is to eliminate avoidable waste through the establishment of standards of practice for sizes, dimensions, varieties, or other characteristics of specific products; to simplify packaging practices; and to establish simplified methods of performing specific tasks.

The initial printing of Commercial Standard CS216-58 was made possible through the financial cooperation of the Insulating Siding Association.

454789-58

Asphalt Insulating Siding

[Effective January 1, 1958]

1. PURPOSE

1.1 This Commercial Standard is offered as a basis of common understanding in the asphalt insulating siding industry for the convenience of manufacturers, distributors, homeowners, architects, and builders.

2. SCOPE

2.1 This standard provides minimum requirements and tests for asphalt insulating siding to be used in building construction. It also covers definitions, labeling, installation, and a means of declaring compliance with the standard.

3. DEFINITIONS

3.1 *Asphalt insulating siding*.—An insulating board composed of vegetable fiber partially impregnated with bitumen, coated on the weather side with mineral stabilized asphalt, and surfaced on the weather side with mineral granules. The granules may be of solid or mixed colors, and the weather surface may be embossed and/or textured.

3.2 *"Square."*—The amount of material necessary to cover 100 sq. ft.

4. GENERAL REQUIREMENTS

4.1 *Saturant and coating*.—The bitumen of the saturant and coating shall be asphaltic.

4.2 *Surface finish*.—The surface of the weather side shall be uniform in finish and may be embossed and textured. The mineral granules shall cover the exposed surface except where they are impressed for purposes of design.

4.3 *Freedom from defects*.—The finished material shall be free from visible external defects, such as holes, ragged or untrue edges, rents, cracks, indentations, or lumps of coating.

4.4 *Shape*.—The form and size of the panels shall be as agreed upon between the purchaser and the seller. The area of a panel shall not exceed 5 sq. ft. in exposed surface.

4.5 *Area*.—Sufficient material per "square" shall be furnished to cover adequately 100 sq. ft. of sidewall area.

4.6 *Packing*.—The siding shall be packed in cardboard cartons or between wood or cardboard ends, and tied securely so as to make a substantial package weighing not more than 135 lb., gross.

4.7 *Marking*.—Each package shall be marked plainly with the name and brand of the manufacturer, as well as with the style, type,

and color of the finished product. Direction sheets for installation shall be included in at least every fifth package.

4.8 *Stickiness*.—The siding shall not stick together upon being unpacked.

4.9 *Inspection*.—Inspection of material shall be made as agreed upon by the purchaser and the seller as part of the purchase contract.

4.10 *Basis of rejection*.—Failure to conform to any one of the requirements prescribed in these specifications shall constitute grounds for rejection. In case of rejection, the seller shall have the right to reinspect the rejected shipment and resubmit the lot after removal of those packages not conforming to the specified requirements.

5. DETAIL REQUIREMENTS

5.1 *Impregnation with hot saturant*.—The board shall be partially impregnated with hot saturant on both sides and all edges. The weather side shall be impregnated to a depth of at least 0.060 in.

5.2 *Shiplap*.—The overlying shiplap shall approximate $\frac{1}{2}$ in. in width. The underlying shiplap shall be $\frac{1}{2}$ to $\frac{3}{8}$ in. shorter than the overlying shiplap. In case of panels intended for overlap application, this requirement applies only to the shiplaps at the end of the panel.

5.3 *Squareness*.—Panels shall be not more than $\frac{1}{16}$ in. out of square per panel.

5.4 *Effect of heating on coating*.—On heating the material to 176° F. (80° C.) for 2 hours, the coating shall not slide more than an average of $\frac{1}{32}$ in.

5.5 *Weight of finished siding*.—The average net weight of finished siding (dry basis) shall be not less than 180 pounds per "square." Minimum weight of any "square" of siding in a shipment shall be 175 lb.

5.6 *Weight of extracted dry board*.—The average weight of extracted dry board shall be not less than 63 pounds per "square."

5.7 *Weight of total soluble bitumen*.—The average weight of total soluble bitumen in the finished siding shall be not less than 25 pounds per "square."

5.8 *Weight of weather-side, mineral-stabilized coating*.—The average weight of the weather-side, mineral-stabilized coating shall be not less than 35 pounds per "square."

5.9 *Weight of mineral granules*.—The average weight of mineral granules retained on No. 100 (149-micron) sieve shall be not less than 25 pounds per "square."

5.10 *Weight of mineral matter passing No. 100 sieve*.—The average percentage of weight of mineral matter passing the No. 100 (149-micron) sieve, on the basis of the sum of the bitumen in the coating and the mineral matter passing the No. 100 sieve, shall not exceed 65 nor be less than 35. Asbestos fiber, if present in the mineral matter on the No. 100 sieve, shall be included in this percentage.

5.11 *Board thickness*.—The nominal thickness of the board shall be $\frac{1}{2}$ in. and no board shall average less than 0.45 in.

5.12 *Transverse strength*.—The average transverse strength shall be not less than 15 lb.

5.13 *Water absorption*.—The average percentage by volume of water absorption, after 2 hours immersion, shall not exceed 10.

5.14 *Insulating value.*—Thermal conductance (C) of asphalt insulating siding with nominal $\frac{1}{2}$ in. thick base fiberboard core shall not exceed 1.05 Btu/hr/sq ft/°F. at a mean temperature of 70° F. (See par. 6.2.)

The conductance value as specified herein, and determined as outlined in paragraph 6.2, shall not be used for calculating wall conductance values without suitable allowance for air space normally accompanying the installation of insulating siding.

6. METHOD OF TEST

6.1 Asphalt insulating siding shall be tested in accordance with ASTM D1228-52T, Tentative Methods of Testing Asphalt Insulating Siding Surfaced with Mineral Granule,¹ to determine conformance with requirements of sections 4 and 5 (excepting par. 5.14) of this standard.

6.2 *Insulating value.*—The insulating value of asphalt siding shall be determined in accordance with ASTM Designation: D177-45, Method of Test for Thermal Conductivity of Materials by Means of the Guarded Hot Plate.¹

The specimens of insulating siding which are to be employed in the guarded hot plate test shall be prepared as follows:

Place the siding specimen in an oven at $215^{\circ}\text{F.} \pm 5^{\circ}\text{F.}$ with the granule face up. Place over it a smooth steel plate of nominal $\frac{1}{4}$ in. thickness and of the same dimensions as the test specimen. Allow to remain in the oven for a sufficient time so that the embossed granule face is essentially leveled without causing appreciable extrusion at the edges. This can be determined by occasional inspection.

The specimens shall be installed in the hot plate apparatus and tested soon after removal from the oven, to guard against hygroscopic gain of moisture from the atmosphere.

7. LABELING

7.1 In order that purchasers may be assured of obtaining asphalt insulating siding conforming to the requirements of this standard, it is recommended that products complying therewith bear a certificate, label, or imprint containing the following wording:

This asphalt insulating siding complies with all the requirements of Commercial Standard CS216-58, as developed by the trade under the procedure of the Commodity Standards Division and issued by the U. S. Department of Commerce.

(Name of manufacturer)

8. INSTALLATION

8.1 Installation shall be in accordance with the recommendations of the manufacturer except when such recommendations are at variance with the stated requirements of the architect, builder, or other responsible organization.

¹ Copies may be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.

9. EFFECTIVE DATE

9.1 Having met all procedural requirements of the Commodity Standards Division, including approval by the acceptors hereinafter listed, this Commercial Standard was issued by the U. S. Department of Commerce, effective January 1, 1958.

EDWIN W. ELY,
Chief, Commodity Standards Division.

HISTORY OF PROJECT

On April 7, 1955, the Insulating Siding Association requested the cooperation of the Commodity Standards Division in the establishment of a Commercial Standard for asphalt insulating siding.

The proposed standard was first submitted to interested industry and governmental organizations for advance review and then adjusted, in accordance with comment, at Technical Committee conferences. On July 15, 1957, the recommended standard was circulated to the industry for further consideration and acceptance.

Firms and others interested submitted official acceptances estimated to represent a satisfactory majority of the production volume and a sufficient cross section of the industry to insure successful application of the standard. On December 2, 1957, the promulgation of this standard as CS216-58 was announced, effective for new production from January 1, 1958.

Project Manager: Harold A. Bonnet, Commodity Standards Division, Office of Technical Services.

Technical Advisers: Dr. H. R. Snoke, Assistant Chief, Building Technology Division; and H. E. Robinson, Chief, Heat Transfer Section, National Bureau of Standards.

STANDING COMMITTEE

The following individuals comprise the membership of the standing committee, which is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Comments concerning the standard and suggestions for revision may be addressed to any member of the committee or to the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, which acts as secretary for the committee.

R. G. BREEDEN, JR., Insulating Siding Association, 1201 Waukegan Rd., Glenview, Ill. (Advisory member.)

DONALD E. FRAZIER, Bird & Son, Inc., 1472 W. 76th St., Chicago, Ill.

THOMAS F. HARLAND, Mastic Asphalt Corp., 131 S. Taylor St., South Bend, Ind.

JAMES McCRAWLEY, *National Roofer, Siding & Insulation Contractor*, Shelter Publications, 315 W. Madison St., Chicago, Ill.

C. B. NOLAN, Acme Roofing & Supply Co., 2210 W. 71st St., Chicago, Ill.

E. R. SANDS, Sands Wholesale Distributing Co., Inc., 232 E. 17th St., Chicago Heights, Ill.

ACCEPTANCE OF COMMERCIAL STANDARD

If acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this Commercial Standard.

Date _____

Commodity Standards Division
Office of Technical Services
U. S. Department of Commerce
Washington 25, D. C.

Gentlemen:

We believe that Commercial Standard CS216-58 constitutes a useful standard of practice, and we individually plan to utilize it as far as practicable in the

production ¹ distribution ¹ purchase ¹ testing ¹
of asphalt insulating siding.

We reserve the right to depart from the standard as we deem advisable.

We understand, of course, that only those articles which actually comply with the standard in all respects can be identified or labeled as conforming thereto.

Signature of authorized officer _____
(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer _____

Organization _____
(Fill in exactly as it should be listed)

Street address _____

City, zone, and State _____

¹ Underscore the one that applies. Please see that separate acceptances are filed for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interest, trade associations, trade papers, etc., desiring to record their general support, the words "General support" should be added after the signature.

TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial Standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices, and the like.

2. *The acceptor's responsibility.*—The purpose of Commercial Standards is to establish, for specific commodities, nationally recognized grades or consumer criteria, and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the standard, where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of Commercial Standards on a nationwide basis is fourfold: First, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active, valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or of the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

ACCEPTORS

The organizations listed below have individually accepted this standard for use as far as practicable in the production, distribution, purchase, or use of asphalt insulating siding. In accepting this standard they reserve the right to depart from it as they individually deem advisable. It is expected that products which actually comply with the requirements of this standard in all respects will be regularly identified or labeled as conforming thereto, and that purchasers will require such specific evidence of conformity.

ORGANIZATION

| | |
|---|--|
| Ace Asphalt Products Co., Chicago, Ill. | Minnesota and Ontario Paper Co., Insulite Div., Minneapolis, Minn. |
| Asphalt Products Co., Los Angeles, Calif. | Modernette Manufacturing Co., Rochester, N. Y. |
| Bestwall-Certain-teed Sales Corp., Ardmore, Pa. | Onelda Supply Co., Toledo, Ohio. |
| Bird & Son, Inc., East Walpole, Mass. | Patzig Testing Laboratories, Des Moines, Iowa. |
| Celotex Corp., (The), Chicago, Ill. | (General support.) |
| Dealers Supply Co., Portland, Oreg. | Richmond Builders Supply Corp., Richmond, Va. |
| Eastern Distributors Co., Inc., Morton, Pa. | Roofers Supply, Springfield, Mass. |
| Eastern Distributors Co., Inc., Philadelphia, Pa. | Sands Wholesale Distributing Co., Inc., Chicago Heights, Ill. |
| Eastern Distributors Co., Inc., Haddon Heights, N. J. | Savanna Fabricators, Inc., Chicago, Ill. |
| EDCO Products, Inc., Hopkins, Minn. | Waltile Co., Grand Rapids, Mich. |
| Flintkote Co., (The), New York, N. Y. | Wholesale Building Materials Co., Los Angeles, Calif. |
| General Roofing Co., Inc., Baltimore, Md. | National Bureau of Standards, Heat Transfer Sec., Washington, D. C. (General support.) |
| Lincoln Wholesale Roofing Co., Inc., Buffalo, N. Y. | |
| Massachusetts General Hospital, Boston, Mass. | |
| Mastic Asphalt Corp., South Bend, Ind. | |

Other Commercial Standards

A list of Commercial Standards may be obtained from the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. This list includes the purchase price of each publication and gives directions for ordering copies.

TS-5504
September 1, 1960

A M E N D M E N T

TO

ASPHALT INSULATING SIDING
Commercial Standard CS216-58

(EFFECTIVE OCTOBER 1, 1960)

(ISSUED WITH APPROVAL OF THE STANDING COMMITTEE)

Paragraph 5.7 - Delete in its entirety
and substitute:

"5.7 Weight of total soluble bitumen -
The average weight of total soluble bi-
tumen in the saturated board shall be
not less than 25 pounds per square."

USCOMM-DC-60,765

FEDERAL REGISTER

DEPARTMENT OF COMMERCE National Bureau of Standards VOLUNTARY PRODUCT STANDARDS

Notice of Action on Proposed Withdrawal

In accordance with the provisions of § 10.12 of the Department's published "Procedures for the Development of Voluntary Product Standards" (15 CFR Part 10, as amended; 35 F.R. 8349 dated May 28, 1970), notice is hereby given of the withdrawal of the 36 commercial standards (CS) and 25 simplified practice recommendations (SPR) identified below. Each of these standards has been found to be obsolete, no longer technically adequate, no longer generally acceptable to and used by the industry, inconsistent with established policy, or otherwise inappropriate, and revision is not feasible or would serve no useful purpose.

- CS 14-51 Boys' sport and dress shirt (woven fabrics) size measurements.
- CS 33-43 Knit underwear (exclusive of rayon).
- CS 56-60 Strip oak flooring.
- CS 70-41 Phenolic disinfectant (emulsifying type).
- CS 71-41 Phenolic disinfectant (soluble type).
- CS 90-58 Power cranes and shovels.
- CS 101-63 Flue-connected oil-burning space heaters and recessed heaters with vaporizing pot-type burners.
- CS 104-63 Warm-air furnaces equipped with vaporizing-type oil burners.
- CS 106-57 Boys' pajama sizes (woven fabrics).
- CS 109-44 Solid-fuel-burning forced-air furnaces.
- CS 111-43 Earthenware (vitreous-glazed) plumbing fixtures.
- CS 113-63 Oil-burning floor furnaces equipped with vaporizing pot-type burners.
- CS 128-52 Men's sport shirt sizes—woven fabrics (other than those marked with regular neckband sizes).
- CS 129-47 Materials for safety wearing apparel.
- CS 131-46 Industrial mineral wool products, all types—testing and reporting.
- CS 134-46 Cast aluminum cooking utensils (metal composition).
- CS 135-46 Men's shirt sizes (exclusive of work shirts).
- CS 145-47 Testing and rating hand-fired hot water supply boilers.
- CS 152-48 Copper naphthenate wood preservative (spray, brush, dip applications).
- CS 158-49 Model forms for girls' apparel.
- CS 165-50 Zinc naphthenate wood preservative (spray, brush, dip applications).
- CS 174-41 140-F drycleaning solvent.
- CS 177-62 Bituminous-coated metal septic tanks (residential).
- CS 178-51 Testing and rating ventilating fans (axial and propeller types).
- CS 180-52 Model forms for boys' apparel.
- CS 183-51 Boys' trouser size measurements.
- CS 185-52 Wool felt.
- CS 186-52 Boys' sport outerwear size measurements.
- CS 196-60 Warm-air furnace burner units equipped with pressure-atomizing or rotary type oil burners.
- CS 198-55 Model forms for toddlers' and children's apparel.

- CS 198-55 Infants', children's, girls' and boys' knit underwear (exclusive of rayon, acetate, and nylon).
- *CS 216-58 Asphalt insulating siding.
- CS 235 61 Pressure treated wood fence posts (with oil-type preservatives).
- CS 249-62 Pressure-treated Douglas fir marine piles.
- CS 250-62 Pressure-treated southern pine marine piles.
- CS 271-65 Grading of abrasive grain for grinding wheels.
- SPR 17-47 Heavy forged hand tools.
- SPR 44-49 Boxboard thicknesses.
- SPR 60-55 Machine, carriage and lag bolts, and nuts (case quantity and gross weight).
- SPR 72-27 Solid section steel windows.
- SPR 77-45 Hickory handles.
- SPR 100-47 Welded chain.
- SPR 125-31 Waxed tissue paper.
- SPR 136-32 Flax and hemp twine.
- SPR 147-42 Wire diameters for mineral aggregate production screens.
- SPR 157-50 Steel firebox boilers and steel heating boilers (commercial and residential).
- SPR 168-37 Braided shoe laces.
- SPR 180-41 Copper conductors for building purposes.
- SPR 183-46 Brass or bronze valves (gate, globe, angle, and check).
- SPR 184-47 Iron valves (gate, globe, angle, and check).
- SPR 185-47 Pipe fittings (gray cast-iron, malleable iron, and brass or bronze).
- SPR 190-42 Stove pipe and accessories.
- SPR 198-50 Wire rope.
- SPR 207-60 Pipes, ducts and fittings for warm air heating and air-conditioning systems.
- SPR 214-55 Metal-cutting band saws (hard edge flexible back).
- SPR 220-46 Open-end and box wrenches.
- SPR 227-47 Plumbing fixture fittings and trim for housing.
- SPR 229-63 Vises (machinists' and other bench-mounted vises).
- SPR 238-50 Convectors.
- SPR 245-51 Weldless chain and chain products.
- SPR 259-56 Hexagon-head cap screws (case quantity and gross weight).

Public notice of the intention to withdraw these standards was published in the FEDERAL REGISTER on June 21, 1972 (37 F.R. 12248), and a 45-day period was provided for the submission of comments or objections concerning the proposed withdrawal of any of these standards. No valid objections to the withdrawal of any of these standards have been received by the National Bureau of Standards.

→ The effective date for the withdrawal of these standards will be 60 days after the publication of this notice. This withdrawal action terminates the authority to refer to these standards as voluntary product standards developed under the Department of Commerce Procedures.

LAWRENCE M. KUSHNER,
Acting Director.

AUGUST 18, 1972.

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